

12th Workshop on the Future Direction of Photovoltaics
28-29 January 2016, Tokyo Tech Front, Tokyo Institute of Technology
Tokyo, Japan

Program

Organized by: The Japan Society for the Promotion of Science,
The 175th Committee on Innovative Photovoltaic Power Generating Systems

January 28, Thursday

Opening (Session Chairperson, Makoto Tanaka)

10:00-10:10 **Opening Remarks**
M. Konagai, Tokyo City University, Chairman of the JSPS 175th Committee

Plenary Session (Session Chairperson, Makoto Tanaka)

10:10 -10:40 Present Status of METI/NEDO and MEXT/JST Photovoltaic Research & Development
Programs in Japan
M. Konagai, Tokyo City University

10:40 -11:10 Challenges and Opportunities of High-Performance Solar Cells and PV Modules
in Large Volume Production
Pierre Verlinden, Trina Solar

11:10 -11:40 Current situation and issues of PV systems in Japan from the
viewpoint of a system integrator
Keiichiro Hakuta, NTT FACILITIES, INC.

11:40 -12:10 Present Status and Future Prospects in Perovskite Solar Cells
Tsutomu Miyasaka, Toin University of Yokohama

12:10-13:30 **Lunch**

13:30-15:20 **Session 1 *Perovskite Solar Cells*** (Session Chairperson, Tsutomu Miyasaka)

13:30-14:00 P-type Contact Materials for Perovskite Solar Cells
Chao-Yu Chen, NCKU

14:00-14:30 Perovskite Solar Cells
-Enhancement of Efficiency from the View Point of New Perovskite Materials and Interface Architecture
Shuzi Hayase, Kyushu Institute of Technology

14:30-14:50 Hybrid Organic-Inorganic Halide Perovskite Materials for Photovoltaics: Insights from First Principles
Giacomo Giorgi, The Univ. of Tokyo

14:50-15:20 Perovskite Solar Cells - Crystal Structure and Interface Architecture
Satoshi Uchida, The Univ. of Tokyo

15:20-15:30 break

15:30-17:50 **Session 2 *Perovskite Solar Cells*** (Session Chairperson, Hiroshi Segawa)

15:30-16:00 Perovskite Solar Cell : Efficiency, Stability and Hysteresis
Nam-Gyu Park, Sungkyunkwan University

16:00-16:30 Recent Advances in Perovskite Solar Cell Research:
Semitransparent and flexible CH₃NH₃PbI₃ solar cells and their stability
Udo Bach, Monash University

16:30-16:50	Inorganic Materials for Perovskite Solar Cells Seigo Ito Univ. of Hyogo
16:50-17:20	Microstructural Development and Characterisation for Perovskite Solar Cells Yi-Bing Cheng, Monash University
17:20-17:50	The Versatility of Mesoscopic Solar Cells Anders Hagfeldt, EPFL
18:00	Reception

January 29, Friday

Session 3	Tutorial	(Session Chairperson, Masafumi Yamaguchi)
10:00-11:00	Surface Passivating Films and Contacts for Silicon Solar Cells Andres Cuevas, Australian National University	
Session 4	Si Solar Cells	(Session Chairperson, Noritaka Usami)
11:00-11:30	NEDO Si Solar Cells Program Yoshio Ohshita, Toyota Tech	
11:30-12:00	Advances in Silicon Heterojunction Solar Cell Research Stefaan De Wolf, EPFL	
12:00-12:30	High Efficiency Rear Emitter Heterojunction Solar Cells with Hydrogenated Amorphous Silicon Oxide Kimikazu Hashimoto, Choshu Industry Co. Ltd.	
12:30-13:00	The Simplicity and Efficacy of a Passivated Rear Contact Frank Feldmann, Fraunhofer ISE	
13:00-14:00	Lunch	
Session 5	CIGS & III-V Solar Cells	(Session Chairperson, Takahiro Wada)
14:00-14:30	NEDO CIGS Solar Cells Program Sigeru Niki, AIST	
14:30-15:00	Status of CIGS Technology Erik Ahlswede, ZSW	
15:00-15:30	NEDO Super-high Efficiency Concept Solar Cells Program Yoshitaka Okada, University of Tokyo	
15:30-16:00	Quantum heterostructure solar cells Ned J. Ekins-Daukes, Imperial College	
16:00-16:15	break	
16:15-18:15	Modules and PV System	(Session Chairperson, Yuzuru Ueda)
16:15-16:45	The role of metallization materials on long term reliability Kazutaka Ozawa, DuPont Electronic Materials K.K.	
16:45-17:15	Overview of potential-induced degradation phenomena and improvement methods for photovoltaic modules Atsushi Masuda, National Institute of Advanced Industrial Science and Technology	
17:15-17:45	Grid Integration of Photovoltaics in Germany - Lessons learned from the past and ongoing developments Thomas Stetz, THM-University of Applied Sciences	
17:45-18:15	Energy System Integration-Development in grid and generation technologies for increasing renewable with economy and security- Kazuhiko Ogimoto, University of Tokyo	
18:15-18:30	Announcement	